

*Sub B)*  
CLAIMS

- 1/ A nib constituted by a segment of a coherent, elongate element of high porosity material, with at least a first end shaped to form a writing tip, wherein the pores and/or capillaries of said material are blocked over a limited thickness  $\epsilon$  at the longitudinal outer periphery of the elongate element, with the exception of the first end forming a writing tip.
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- 10 2/ A nib according to claim 1, wherein for an elongate element of circular cross-section, having a diameter lying in the range 2 mm to 15 mm, the thickness  $\epsilon$  lies in the range 0.01 mm to 1 mm.
- 15 3/ A nib according to claim 1, including a sealing agent which blocks the pores and/or the capillaries of said material over said thickness  $\epsilon$ .
- 20 4/ A nib according to claim 3, wherein the elongate element is a rod that is constituted by acrylic fibers that are held together by an MF resin, and wherein the sealing agent is also an MF resin.
- 25 5/ A nib according to claim 3, wherein the elongate element is a rod that is constituted by polyester fibers, and wherein the sealing agent is an acid-catalyzed melamine resin, a melamine urea-formaldehyde resin, a two-component epoxy resin, or a two-component polyurethane resin.
- 30 6/ A nib according to claim 1, wherein the elongate element is constituted by sintered microbeads, and wherein the pores are blocked by localized hot-melting of said microbeads over said thickness  $\epsilon$ .
- 35 7/ A method of treating a coherent high porosity, elongate element designed to form a nib according to

B) claim 3, the method consisting firstly in continuously impregnating said elongate element with a sealing bath having a sealing agent that is inert relative to the components of the ink, impregnation being performed under 5 conditions of viscosity, of time, of surface tensions, and of concentration in particular, such that said bath diffuses into the elongate element over a limited thickness e at its longitudinal periphery, and said method consists secondly in setting the sealing agent.

10 8/ A method according to claim 7, wherein the elongate element is a rod that is constituted by fibers that are secured by a binder, and said binder is used as the sealing agent.

15 9/ A method according to claim 8, wherein the rod is based on acrylic fibers, and the binding and sealing agent is an acid-catalyzed MF resin.

20 10/ A method according to claim 7, wherein the sealing agent is set by subjecting the elongate element to heat treatment.

25 11/ A nib obtained by cutting into segments and machining a high porosity elongate element treated according to the method of claim 7.

30 12/ A method of treating a segment of coherent high porosity, elongate element designed to form a nib according to claim 6, wherein said segment is obtained by molding and sintering microbeads, and said method consists in applying a longitudinal, peripheral, thermal shock over the segment, with the exception of the first end which forms the writing tip, so as to obtain 35 localized hot-melting of the microbeads over a thickness e.

B) 13/ A method according to claim 12, wherein the thermal shock is performed at a temperature lying in the range 200°C to 300°C for a period of 1 second (s) to 10 s.